



# Amplified EMFs Coming to Your Neighborhood Soon

## STORY AT-A-GLANCE

- › The 5G, or “5th Generation,” wireless network is the latest generation of mobile technologies that the industry is rallying behind; it’s expected to be 10 to 100 times faster than 4G technology and capable of supporting at least 100 billion devices
- › 5G relies primarily on the bandwidth of the millimeter wave (MMW), which has been linked to health problems from eye and heart problems to pain and immune system effects
- › The frequencies utilized by 5G have also been linked to potential concerns with antibiotic resistance and damage to plants, which absorb MMW
- › A provision added to New York Gov. Andrew M. Cuomo’s state budget would usurp municipalities’ authority over whether to install cellphone antennas, instead granting authority to decide on cell tower locations on utility poles, streetlights, arenas and college campuses to the state
- › The provision paves the way for the telecom industry to install 5G wireless antennas on every lamp post, utility pole, home and business throughout entire neighborhoods, towns and cities

**By Dr. Mercola**

The 5G, or “5th Generation,” wireless network is the latest generation of mobile technologies that the industry is rallying behind, touting it as a way to create

faster internet and streaming services, provide better cellphone coverage and even create "vibrant 'smart' cities" with reduced commute times and energy usage and improved public safety courtesy of smart grid efficiencies.<sup>1</sup>

Unlike the "4th Generation" (4G) technology currently in use, which relies on huge 90-foot cell towers with about a dozen antenna ports on each, the 5G system uses "small cell" facilities or bases, each with about 100 antenna ports each.<sup>2</sup> Expected to be 10 to 100 times faster than 4G technology and capable of supporting at least 100 billion devices,<sup>3</sup> 5G relies primarily on the bandwidth of the millimeter wave (MMW), which is between 30GHz and 300GHz, according to EMF coach and author Lloyd Burrell.<sup>4</sup>

*"MMWs ... do not travel well through buildings and they tend to be absorbed by rain and plants. This interferes with the signal. Added to this, high frequency waves like MMWs also have much shorter wavelengths that can't travel far," he says.*

*"To counter this problem 5G will utilize smaller cell stations (and the technology of beamforming) that'll scramble/unscramble and redirect packets of data on a no-interference path back to us. This could mean wireless antennas on every lamp post, utility pole, home and business throughout entire neighborhoods, towns and cities," Burrell explains,<sup>5</sup> and herein lies one of its greatest potential problems — and threats to public health.*

## **New York Governor Sneaks 5G Bill Into State Budget**

If you'd have an issue with a telecom company installing a 5G cell facility outside your home, your office or your child's school, a provision added to Gov. Andrew M. Cuomo's state budget should make you take notice. Currently, each

municipality regulates whether cellphone antennae are allowed in public areas, and the industry must negotiate fees and zoning regulations in each jurisdiction.

They've been lobbying for easier access via the federal and state levels for some time, but so far such measures haven't advanced. Cuomo's provision, however, would usurp municipalities' authority, instead granting authority to decide on cell tower locations on utility poles, streetlights, arenas and college campuses to the state.

Each cell "facility" could include equipment such as electric meters, cables and refrigerator-sized boxes installed near the base of poles.<sup>6</sup> Verizon, not surprisingly, endorsed the measure, saying in a statement:<sup>7</sup>

*"Verizon supports the governor's proposal to establish a uniform small cell siting process that appropriately balances the community's desire for the latest, fastest wireless technology with the interests of local governments in retaining control over the deployment of structures and the use of rights of way ... This measure will promote private investment in state-of-the-art telecommunications networks at no cost to taxpayers."*

Yet, opponents state the provision basically gives away access to the industry, charging just \$20 per installation while the market rate is about \$2,000. Peter Baynes of the New York Conference of Mayors, told Newsday the proposal basically "requires local taxpayers to subsidize industry's installation of these devices," adding "'Sure, they want it cheaper and easier, but when it involves the public right of way, public safety' and community aesthetics, locals should have a say."<sup>8</sup>

Similar proposals have been introduced in 13 states, with California's Gov. Jerry Brown vetoing one in 2017. The fact remains that installing 5G antennas on

millions of utility poles and lampposts across the U.S. represents an unprecedented exposure to wireless networks using a technology that has not been widely used before, with unknown consequences to public health.

## **5G MMWs Penetrate Human Skin, Could Promote Antibiotic Resistance**

While the telecom industry is touting 5G as a necessity for modern life — something that will take us out of the "stone ages" of technology into a new frontier of self-driving cars and washing machines that can order their own soap, "5G is not necessary for public safety," points out Telecom Power Grab, adding:<sup>9</sup>

*"This is not about bringing broadband to underserved communities. This is not about improving cellphone reception. This massive build-out of wireless infrastructure is to enable telecom companies to blast their signals into private homes and apartments to compete with cable companies.*

*While installing more wireless infrastructure may be a goal of the telecom industry, it is not a necessary public service, and the State should not allow any industry to bypass local zoning regulations or discretionary review. Nor should private interests be permitted to use public or private property for their own financial gain without compensating property owners."*

The antennae enclosures added to utility poles and lamp posts may not only be eye sores, including antennae enclosures that are up to 6 cubic feet each, but also pose a very real threat to public health. While MMWs have not been widely used before, there are some concerning findings to date, according to Telecom

Power Grab, including that sweat ducts in human skin act as antennae when they come in contact with MMWs.<sup>10</sup>

"The waves penetrate 1 to 2 millimeters of human skin tissue and are also absorbed by the surface layers of the eye's cornea," Telecom Power Grab notes.<sup>11</sup> In addition, there is a possibility the technology could worsen the problems with [antibiotic-resistant bacteria](#) already plaguing the world, as they cause changes in E. coli and many other bacteria, depressing their growth and changing properties and activity.

This also raises concerns that the technology could lead to similar changes in human cells. According to researchers in the journal Applied Microbiology and Biotechnology:<sup>12</sup>

*"MMW ... or electromagnetic fields of extremely high frequencies at low intensity is a new environmental factor, the level of which is increased as technology advances. It is of interest that bacteria and other cells might communicate with each other by electromagnetic field of sub-extremely high frequency range ...*

*[T]he combined action of MMW and antibiotics resulted with more strong effects. These effects are of significance for understanding changed metabolic pathways and distinguish role of bacteria in environment; they might be leading to antibiotic resistance in bacteria."*

## **Radio Frequency Radiation Linked to Cancer, Other Health Effects**

In May 2011, the International Agency for Research on Cancer (IARC), the cancer research arm of the World Health Organization (WHO), declared [radiofrequency](#)

(RF) radiation from cellphones a Group 2B "possible carcinogen," meaning a "possible cancer-causing agent," based on the available research.

The \$25 million research conducted by the National Toxicology Program (NTP) — an interagency research program started by the U.S. Department of Health and Human Services (HHS) in 1978 and now housed at the National Institute of Environmental Health Sciences (NIEHS) — included two separate studies (one on mice and one on rats) that also revealed exposure to the type of radiation emitted by 2G and 3G cellphones could cause heart tumors, DNA damage and tumors in the brain, prostate, liver and pancreas.<sup>13</sup> With 5G technology, additional concerns are raised.

According to research by Dr. Yael Stein of Hebrew University of Jerusalem and colleagues, computer simulations have revealed that sweat glands concentrate MMWs in human skin, which may be sensed as heat waves or physical pain to humans. In a 2016 letter to the Federal Communications Commission (FCC) in opposition of 5G technology, Stein wrote:<sup>14</sup>

*"If these devices fill the public space they will affect everyone, including the more susceptible members of the public: babies, pregnant women, the elderly, the sick and electro hypersensitive individuals.*

*Potentially, if 5G WI FI is spread in the public domain we may expect more of the health effects currently seen with RF/ microwave frequencies including many more cases of hypersensitivity (EHS), as well as many new complaints of physical pain and a yet unknown variety of neurologic disturbances. It will be possible to show a causal relationship between 5G technology and these specific health effects. The affected individuals may be eligible for compensation."*

In addition, Burrell compiled a host of other research that shows the proliferation of 5G for the sake of faster internet could be a public health disaster. For instance, the frequencies utilized by 5G have been linked to:<sup>15</sup>

- Lens opacity in rats, which is linked to the production of [cataracts](#)
- Impacted heart rate variability, and indicator of stress, in rats
- Heart rate changes (arrhythmias) in frogs
- Immune system effects in healthy mice

## **5G Could Harm Plants, Change the Environment in Unforeseen Ways**

There are serious environmental issues to consider as well, especially since MMWs are absorbed by both plants and rain. Studies have already shown that MMWs may invoke stress protein changes in plants such as wheat shoots,<sup>16</sup> while low levels of nonionizing radiation have been linked to disturbances and health problems in birds and bees. It could even pose a danger to the food supply via its potential absorption by plants.

"Humans and animals alike consume plants as a food source. The effects MMW have on plants could leave us with food that's not safe to consume," Burrell stated. "Think [GMOs](#) on steroids. The water that falls from the sky onto these plants will also be irradiated."<sup>17</sup> Many are also not aware that the global 5G wireless network requires the use of rockets to deploy satellites, which has pollution risks in itself, including the release of black carbon into the atmosphere, which could disturb ozone.<sup>18</sup>

## Your Exposure to 5G Will Be Involuntary

Once it's installed in your neighborhood, you won't have a choice to opt out of 5G exposure. In an open letter to medical organizations by the Global Union Against Radiation Deployment From Space (GUARDS), an international coalition against global WiFi from space, "flooding the planet with microwave radiation" in this way is described as a violation of human rights, "including the U.N. Convention on the Rights of Persons with Disabilities, several sections of the U.N. Convention on the Rights of the Child, international human rights as set out per articles 3 and 25 in the Universal Declaration of Human Rights, and all basic precepts of ethics." GUARDS continued:<sup>19</sup>

*"Space-based microwave radiation deployments threaten to inundate the planet with RF radiation without informed individual consent or a meaningful option for individual avoidance.*

*Since wireless transmitters in the upper atmosphere will add to proliferating wireless technologies on the ground (such as wireless utility metering systems and all transmitting antenna components of wireless network equipment and devices), additional dramatic increases in pulse-modulated microwave radiation levels would be anticipated.*

*... Pulse-modulated microwave radiation has been reported by thousands of peer-reviewed studies to cause cancers, DNA damage, infertility and blood-brain barrier damage. It impairs immune, endocrine, cardiovascular, and neurological functions in humans and ultimately adversely affects all living things. Some satellites will use a very high-frequency portion of the spectrum (millimeter waves) shown to cause cellular resonance effects."*



If you want to get involved in keeping 5G out of your community, please contact your legislators to voice your opinion. If you live in New York, you can find [contact information for your calls or letters](#) at TelecomPowerGrab.org, which recommends asking your senator or assemblyperson to protect your rights and property by removing the Small Wireless Facilities Deployments (Article 13-E) from the governor's proposed budget.

If you live elsewhere, Parents for Safe Technology has also compiled a [list of U.S. agencies](#) you can contact about this important issue for the health and safety of future generations and the planet.